

PATENT NO	KIND	DATE	WEEK	LA	PG MAIN IPC
TW 529103	A	20030421	(200377)*		H01L021-31<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
TW 529103	A	TW 2001-127583	20011106

PRIORITY APPLN. INFO: TW 2001-127583 20011106

INT. PATENT CLASSIF.:

MAIN: H01L021-31

## BASIC ABSTRACT:

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NOVELTY - This invention discloses a method of manufacturing a **low dielectric constant** film using a biological process. A semiconductor substrate containing a plural number of metal lines is covered with a **silicon**-rich oxide layer to form an environment similar to a culture medium, protect the metal lines from being attacked by the culture medium and reinforce the metal line structure. The substrate is then soaked in the culture solution to enable growth of **microorganism** containing **silicon**-rich shell or **cellular wall** on the oxide layer. After the **microorganism** grows to a predetermined thickness, the culture solution is withdrawn, the substrate is washed and **dried**, and thus the shell or the **cellular wall** of the **microorganism** remains. Since there are a great amount of pores formed among the **microorganism** remnants and the pores are filled with air or inert gas, the **dielectric** film formed by the **microorganism** remnant stack has a **dielectric** constant almost equal to 1.

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FILE SEGMENT: CPI EPI

FIELD AVAILABILITY: AB; GI

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